

REMARKS/ARGUMENTS

Claims 1-9 and 18-20 remain pending for further prosecution. Claims 10-17 have been cancelled. None of the claims has been amended.

Allowed/Allowable Subject Matter

Claims 18-20 have been allowed. Claims 5, 7, and 8 have been deemed allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Rejection of claims 1-3, 6, and 9 under 35 U.S.C. § 103

Claims 1-3, 6, and 9 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,597,149 to Hodge (“Hodge”).

Claim 1

Regarding claim 1, which is the only rejected independent claim, the office action alleges that Hodge discloses “a plurality of optical component supports (20) cast with said base (10) . . . but does not specifically disclose the supports integral with the base.” The office action further alleges that it “would have been obvious to modify the invention to construct the supports integral with the base since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art (*Howard v. Detroit Stove Works*, 150 U.S. 164 (1893)).”

Claim 1 is directed to having “a plurality of optical components supports cast with and integral with said base and extending from said top surface.” Although the office action acknowledges that Hodge fails to disclose that the posts 20 are integral with the optical table 10, the office action relies on *Howard* to allege that a skilled artisan would know how to integrate the posts 20 with the optical table 10. The invention of claim 1 is patentable over Hodge at least because a) Hodge teaches away from the claimed invention and the proposed modification would render Hodge unsatisfactory for its intended purpose, b) the proposed modification would change the principle of operation of Hodge, and c) the claimed invention provides numerous advantages over the mounting system of Hodge.

A. Hodge teaches away from the claimed invention and the proposed modification would render Hodge unsatisfactory for its intended purpose.

“A *prima facie* case of obviousness may also be rebutted by showing that the art, in any material respect, teaches away from the claimed invention.” Manual of Patent Examining

Procedure (“MPEP”), Eighth Edition, Incorporating Revision No. 5, § 2144.05 (III), p. 2100-141, right column. Further, “[i]f proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.” MPEP, § 2143.01 (V), p. 2100-129, right column.

The clamping base disclosed by Hodge is intended to provide a solution to mounting systems that are “inflexible.” For example, Hodge states that a “drawback of the mounting system illustrated by FIG. 1 is that it is relatively inflexible once it is placed on the bench.” Hodge, col. 1, ll. 60-61 (emphasis added). In other words, the clamping base disclosed by Hodge is intended to allow “flexible” mounting of optical components anywhere on the optical table 10. Specifically, Hodge describes that the “present invention provides an improvement on the aforesaid system by providing a flexible and easy-to-use clamping base that solves the performance problems noted above.” Hodge, col. 2, ll. 28-31 (emphasis added). For example, Hodge describes that “the clamping base 30 can be moved around the bench simply by loosening the channel screw 34. The camp can be moved longitudinally with respect to the channel screw 34, or rotationally about the channel screw 34, without changing the threaded hole 12” Hodge, col. 4, ll. 14-19.

Integrating the clamping base 30 (to which a post 46 would be attached) to the optical table 10 would defeat the purpose of providing what Hodge deems as a flexible system, in which the clamping base 30 can be moved around the bench. Clearly, the mounting system of Hodge teaches away from the claimed invention and would be rendered unsatisfactory for its intended purpose – flexibility to move posts around an optical bench.

B. The proposed modification would change the principle of operation of Hodge.

“If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious.” MPEP, § 2143.01(VI), p. 2100-130, left column. For example, in *In re Ratti* the court reversed a rejection where the claimed invention required “resiliency” for operation and the cited reference taught “rigidity” for operation. *Id.* (citing to *In re Ratti*, 270 F.2d 810, 123 U.S.P.Q. 349 (C.C.P.A. 1959)). Specifically, the court held that the “suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic

principle under which the [primary reference] construction was designed to operate.” *Id.* (citing to *In re Ratti*, 270 F.2d at 813, 123 U.S.P.Q. at 352).

The modification suggested by the office action would require changing Hodge’s “flexible” mounting system to what Hodge would deem as an “inflexible” mounting system. Just like it was improper in *In re Ratti*’s to change the principle of operation from “resiliency” to “rigidity,” the proposed modification is also improper because it changes the principle of operation from “flexible” to “inflexible.”

C. The claimed invention provides numerous advantages over the mounting system disclosed by Hodge.

The claimed invention is intended to solve, in part, the type of problems associated with the mounting system disclosed by Hodge. For example, the Background Of The Invention section of the current application notes several shortcomings associated with the type of mounting systems such as the one disclosed by Hodge:

Such existing designs for optical benches have several shortcomings. They require a number of pieces to form the component-supporting structure. Further, the threaded connections between the component supports and the base may become loose over time, decreasing the accuracy of component placement. Also, a regular hole pattern may not coincide with the ideal mounting location of a component within the laser. In addition, if components are moved for experimentation or replacement, it is important to remember where on the base the component support was located if future setups are to replicate the original setup of the system. In general, the number of mounting components such as posts and fasteners in known optical bench systems increases the complexity and difficulty of using optical benches. There is a need for an optical bench that maintains the stability of component placement and ease of use over time while simultaneously allowing for flexibility in the setup of optical systems. The present invention is directed to such a system.

Thus, the claimed integrated component supports and bench base overcome numerous problems associated with the Hodge mounting system, including reducing the number of pieces required to form the component-supporting structure, increasing accuracy of component placement by eliminating the need for threaded connections, eliminating the need to remember the location of component supports when moved for experimentation. In general, the claimed invention reduces the complexity and difficulty of using optical benches. In contrast, for example, the mounting system of Hodge increases the number of pieces required to form the component-supporting structure (*e.g.*, requires a clamping base 30, a channel screw 36, a clamping screw 38, an allen

wrench 40, a screw 50, a post 46, a short post 48, etc.), relies heavily on threaded connections, and requires remembering location of components supports when moved for experimentation. Thus, the mounting system of Hodge increases the complexity and difficulty of using optical benches.

Accordingly, the Applicants respectfully submit that claim 1, along with all the claims dependent therefrom, is patentable over Hodge at least for the above stated applicable reasons. Further, it is noted that the *Howard* decision is clearly distinguishable from our case at least for the reasons stated above. For example, in *Howard* the court stated that at least one portion of a claimed grate (*i.e.*, the grate teeth) served “exactly the same purpose as” a grate disclosed by prior art. *Howard*, 150 U.S. at 169. Thus, it is apparent that modifying the claimed grate to be cast in one piece (as opposed to two pieces) would not render the prior art grate unsatisfactory for its intended purpose or change its principle of operation. Additionally, the claimed grate did not provide any advantages over the prior art grate. Accordingly, the court’s holding (that merely providing a grate in one piece, which has been formerly cast in two pieces, does not involve an invention) is not applicable to our case.

Claim 2

Regarding claim 2, the office action alleges that Hodge discloses optical component supports (20) that are “provided in a plurality of widths, (the posts are adjustable) (col. 1, lines 45-47).” Claim 2 is directed to optical component supports that are provided “in a plurality of widths.” Nowhere does Hodge disclose this claim element. The cited portion of Hodge, which is relied on by the office action, describes the following:

In order to move the optical component, the post 20 may be raised or lowered, or rotated about the axis of the post holder 22. The post is locked into place using a screw 24 inserted through the post holder 22 to contact the post 20, thereby frictionally holding the post 20 in place.

Hodge, col. 1, ll. 44-48. There is no mention regarding the post 20 having an adjustable width. Clearly, Hodge fails to disclose at least one claim element – optical component supports provided in a plurality of widths.

Accordingly, the Applicants respectfully submit that claim 2 is patentable over Hodge at least for the above stated applicable reasons.

Claim 6

Regarding claim 6, the office action alleges that Hodge discloses that "at least two of said optical component supports (20) are sized and positioned to act in concert to hold a single optical component (14)." Claim 6 is directed to having "at least two of said optical component supports [] sized and positioned to act in concert to hold a single optical component." Hodge fails to disclose this claim element. In contrast to the claim, which requires at least two optical component supports, Hodge discloses at most one post 20 for supporting a lens 14. Figure 1 of Hodge, and the accompanying description (col. 1, ll.34-52), makes it clear that only a single post 20 is used for supporting the lens 14.

Accordingly, the Applicants respectfully submit that claim 2 is patentable over Hodge at least because Hodge fails to disclose at least two optical component supports for supporting a single optical component.

Rejection of claim 4 under 35 U.S.C. § 103

Claim 4 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Hodge in view of U.S. Patent No. 6,771,437 B1 to Willis ("Willis"). Applicants respectfully submit that claim 4 is patentable over Hodge in view of Willis at least for the applicable reasons stated above in reference to claim 1.

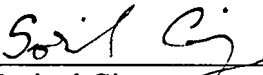
Conclusion

It is the Applicants' belief that all of the claims are now in condition for allowance and action towards that effect is respectfully requested. If there are any matters which may be resolved or clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney at the number indicated.

It is believed that no fees are due; however, should any additional fees be required (except for payment of the issue fee), the Commissioner is authorized to deduct the fees from Nixon Peabody LLP. Deposit Account No. 50-4181, Order No. 247080-000047USPT.

Respectfully submitted,

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Sorinel Cimpoeș
Reg. No. 48,311
Nixon Peabody LLP
161 North Clark, 48th Floor
Chicago, Illinois 60601-3213
One of the Attorneys for Applicants
(312) 425-8542